

ABSTRACT OF THE DISCLOSURE

A solid state image pickup device having: a vertical addition unit for adding electric charges of two or more photoelectric conversion elements on a vertical charge transfer path, by controlling read gates and the vertical charge transfer path to read electric charges from some of the plurality of photoelectric conversion elements to the vertical charge transfer path, transfer the read electric charges on the vertical charge transfer path to the downstream side in the vertical direction, and read electric charges from others of the plurality of photoelectric elements on the downstream side to the vertical charge transfer path; and a horizontal addition unit for adding electric charges transferred from two or more of the vertical charge transfer paths, on the horizontal charge transfer path, by controlling transfer gates and the horizontal charge transfer path to transfer electric charges from some of the plurality of vertical charge transfer paths to the horizontal charge transfer path, transfer the electric charges on the horizontal charge transfer path to the downstream side in the horizontal direction, and transfer electric charges from others of the plurality of vertical charge transfer paths on the downstream side to the horizontal charge transfer path.